

# California HIV/AIDS Update



## *In This Issue:*

**The Pacific AIDS Education and Training Center: A Resource for California's HIV Clinical Care Providers** Cover

**California's AIDS Drug Assistance Program** page 68

**The Need for Methods Women Can Control for Preventing HIV Infection and Other Sexually Transmitted Diseases** page 70

**Surveillance Report** page 74

## **The Pacific AIDS Education and Training Center: A Resource for California's HIV Clinical Care Providers**

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Project Director

The mission of the Pacific AIDS Education and Training Center (Pacific AETC) is to provide health care professionals with the knowledge and skills necessary to care for HIV-infected patients and to increase the numbers of trained health care professionals working with HIV-infected patients in the community.

The Pacific AETC is funded by the federal Ryan White CARE Act to provide education and training to health care providers on the front line of HIV clinical care in California, Arizona, Nevada, and Hawai'i. It is one of 15 regional AETCs that cover all 50 states, Puerto Rico, and the Virgin Islands. Headquartered at the University of California, San Francisco (UCSF), the Pacific AETC utilizes a decentralized training model, with multidisciplinary faculty trainers at 17 performance sites.

The AETC offers educational programs for a wide variety of health care professionals including

physicians, nurses, physician assistants, nurse practitioners, dentists, dental hygienists, mental health providers, and others. Programs have been designed on the following three levels according to the experience, knowledge, and needs of trainees:

- **Level I** builds basic knowledge and skills via lectures and didactic seminars. Examples include noon conferences, grand rounds, or regional day-long AIDS conferences.
- **Level II** develops specific skills related to HIV prevention and care, through workshops, seminars, and brief clinical experiences. These activities require active trainee participation. Examples include workshops on nondirective counseling of pregnant women with HIV or patient adherence to complicated HIV medical regimens.

- **Level III** increases clinical competence in assessing and managing patients through intensive clinical rotations and preceptorships. These are often "mini-residency" experiences.

### **Clinical Training Programs**

Intensive mini-residencies are conducted in environments of direct patient care at clinics serving large numbers of HIV patients. Faculty are primary care physicians, dentists, nurse practitioners and physician assistants, as well as specialists in disciplines that concentrate on HIV disease. One week rotations are common, although various options for scheduling training programs are available. Clinical training programs run year-round with the exception of holidays and weekends. All programs are offered at little to no cost to licensed clinicians and continuing education credits are available.

### **Special Training Initiatives**

In addition to the ongoing training programs discussed above, the Pacific AETC is involved in the following special training initiatives:

#### *Statewide Training of Correctional Facility Providers*

The Pacific AETC has developed a memorandum of understanding with the California Department of Corrections in partnership with the Francis J. Curry Tuberculosis Training Center at UCSF. A multi-faceted training program is being developed based on a systemwide needs assessment and site visits. The program includes information dissemination, designated mini-residency training slots, and a regional standardized training curriculum.

#### *Reducing Perinatal Transmission of HIV*

The Pacific AETC continues a contract to train providers in federally-funded clinics in the skills necessary to reduce perinatal HIV transmission. Covering nine western states, this project includes skills building in nondirective counseling/testing, didactic components related to implementing the recommendations of AIDS Clinical Trials Group (ACTG) 076, and issues related to culturally congruent HIV health care delivery.

#### *Treatment Adherence*

In collaboration with the National AETC Program, the Pacific AETC is developing multi-disciplinary training curricula that address provider and patient issues related to complicated HIV treatment regimens. The process includes partnering with colleagues at the

University of Pittsburgh and Columbia University, as well as linking with the activities of various pharmaceutical companies.

### *Evaluation Projects*

For the first time, the Pacific AETC is inviting our network of performance sites to compete for funding for projects to improve provider training programs. Eligible projects include studies to measure outcomes, better target training to HIV care providers, and better define effective components of adherence training.

### **Health Resources and Services Administration (HRSA)/AETC National HIV Telephone Consultation Service (Warmline)**

The HRSA/AETC National HIV Telephone Consultation Service (the Warmline), housed at San Francisco General Hospital, offers health care providers up-to-the-minute clinical information and case consultation. Staffed by clinicians experienced in HIV care, the Warmline supports health care providers in caring for their patients with asymptomatic and symptomatic HIV disease, enabling more patients to remain in their communities with their own medical providers and social support networks. The Warmline has answered more than 17,000 calls to date.

Questions cover a broad spectrum of clinical issues. Most callers request guidance regarding management options for clinical problems related to specific diseases, treatment and prophylaxis, and clinical manifestations. Transmission and prevention questions, often about occupational exposures, are also frequent. Management strategies are discussed by phone.

Warmline staff mail or fax articles and protocols from the medical literature, as well as government-approved guidelines, as needed. They also make referrals to local, regional, and national information services. Warmline services are available Monday through Friday from 7:30 a.m. to 5:00 p.m. A voice mail system takes messages 24 hours/day, seven days a week. The majority of calls are answered immediately, with 95 percent answered the same day.

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**California's AETC-Affiliated Performance Sites and Service Areas****Pacific AETC**

Central Administrative Offices  
500 Parnassus, Box 900  
San Francisco, CA 94143-0900  
Phone (415) 502-8196

**San Francisco Area AETCs:**

*Marin, San Francisco, and San Mateo Counties*

**Community Providers AIDS Training (CPAT)**

San Francisco General Hospital  
Site Director: Ronald Goldschmidt, MD  
Phone (415) 476-7059

**UC San Francisco School of Nursing**

Site Director: Helen Miramontes, RN, MS, FAAN  
Phone (415) 476-6602

**Los Angeles Area AETCs:**

*Los Angeles, Santa Barbara, and Ventura Counties*

**University of Southern California AETC**

Site Director: Jerry Gates, PhD  
Phone (213) 342-1846

**UC Los Angeles AETC**

Site Director: Charles Lewis, MD  
Phone (310) 794-7130

**Drew University of Medicine and Science**

Site Director: Allen Funnye, MD  
Phone (310) 668-4758

**UC Irvine AETC**

*Orange, Riverside, and San Bernardino Counties*  
Site Director: Jeremiah Tilles, MD  
Phone (714) 824-5454

**UC San Diego AETC**

*Imperial and San Diego Counties*  
Site Director: Chris Mathews, MD  
Phone (619) 294-3767

**East Bay Area AETC**

*Alameda, Contra Costa, and Solano Counties*  
Highland Hospital  
Site Director: Kathleen Clanon, MD  
Phone (510) 437-5172

**UC Davis AETC**

*Alpine, Amador, Butte, Calaveras, Colusa, El Dorado, Glenn, Lassen, Modoc, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Sierra, Siskiyou, Stanislaus, Sutter, Tehama, Trinity, Tuolumne, Yolo, and Yuba Counties*  
Site Director: Frederick Meyers, MD  
Phone (916) 734-3365

**San Jose Area AETC**

*Monterey, San Benito, San Luis Obispo, Santa Clara, and Santa Cruz Counties*  
Health Education and Training Center  
Site Director: Esperanza Garcia-Walters, RN, MPH  
Phone (408) 881-0230

**North Coast Area AETC**

*Del Norte, Humboldt, Lake, Mendocino, Napa, and Sonoma Counties*  
Sonoma Academic Foundation for Excellence in Medicine  
Site Director: Marshall Kubota, MD  
Phone (707) 527-6223

**San Joaquin Valley Area AETC**

*Fresno, Inyo, Kern, Kings, Madera, Mariposa, Merced, Mono, and Tulare Counties*  
San Joaquin Valley Health Consortium  
Site Director: Joy Grado  
Phone (209) 446-2323

**The Warmline**

**7:30 a.m.-5:00 p.m. PST**

**Monday-Friday**

**Phone number: (800) 933-3413**

Who should call:

Physicians	Dentists
Nurses	Other health care
Nurse Practitioners	workers caring for
Physician Assistants	HIV infected persons
Pharmacists	

## California's AIDS Drug Assistance Program

Janice Vina  
California Department of Health Services  
Office of AIDS

### Background

The Department of Health Services Office of AIDS (DHS/OA) administers the California AIDS Drug Assistance Program (ADAP). The goal of the ADAP is to make available, in an effective and timely manner to people living with HIV, pharmaceutical and other treatments which are reliably expected to increase survival, reduce morbidity, and improve the quality of life. The program provides HIV/AIDS medications to low-income persons who are uninsured or underinsured. ADAPs exist in all 50 states and the District of Columbia; however, after two years of dramatic growth, California's ADAP is the largest in the country. With a budget of \$90.3 million and a formulary of 53 drugs, the ADAP will serve 20,000-25,000 Californians this fiscal year.

The program's sudden expansion resulted from the development of promising HIV/AIDS treatment regimens that include the new protease inhibitors. Although they are very effective, these new combination therapies are also very costly. For example, a year's supply of antiretroviral drugs used in triple combination costs approximately \$12,500 per person. As a consequence of the new treatments, ADAPs nationwide have experienced rapid increases in demand and cost. Thirty-five states reported taking emergency measures during the last year to avoid bankruptcy of their ADAPs.

### Eligibility Requirements

An individual is eligible for California's ADAP if he/she:

- is HIV-infected;
- is not eligible for or covered by Medi-Cal or any other third-party payor;
- is a resident of California;
- is 18 years of age or older;
- has an annual adjusted gross income below \$50,000;
- has a valid prescription from a California licensed physician; and

- has an acceptable form of photo identification.

ADAP is specifically intended as a program of last resort for those people who have no other resources to pay for their drugs. A copayment is required for anyone whose annual adjusted gross income is between 400 percent of the federal poverty level (currently \$31,560) and \$50,000. Persons with an annual adjusted gross income below 400 percent of poverty level receive the drugs free, as statutorily mandated.

### Funding

Although California was among the states taking emergency measures to respond to increased costs, it successfully increased program resources without reducing the number of drugs available, changing eligibility requirements, or reducing the number of persons served. Of the ADAP's \$90.3 million budget, \$40.2 million are state General Funds, establishing California as the state making the largest contribution toward its ADAP. Other support for the ADAP comes from the federal Ryan White CARE Act and from mandatory drug manufacturer rebates. Table 1 shows ADAP funding and the number of drugs on the formulary by fiscal year.

California's ADAP has experienced phenomenal growth without significant modifications to its regulations or operational systems. However, in an effort to improve service and increase access, the DHS/OA has recently contracted to centralize ADAP drug dispensing, reimbursement, and data collection activities. The contractor, Professional Management Development Corporation, began providing centralized services on October 1, 1997.

In addition to centralized management, the California ADAP uses a variety of other cost-containment methods. Drug rebates from pharmaceutical manufacturers with drugs on the ADAP formulary, once voluntary, became legislatively mandated in July 1997. The ADAP monitors compliance with eligibility criteria and maximizes the use of third-party payers (e.g., CARE/HIPP, Medi-Cal, and private insurance). The ADAP also uses field auditors to standardize eligibility screening by local health jurisdictions and to insure that ADAP is the payor of last resort.

**Table 1. California ADAP Funding and Number of Drugs on Formulary, by Fiscal Year**

Fiscal Year (FY)	Funding (millions)	No. of Drugs
FY 1990-91	\$ 9.3	2
FY 1991-92	\$14.3	13
FY 1992-93	\$13.7	13
FY 1993-94	\$14.2	25
FY 1994-95	\$16.9	43
FY 1995-96	\$17.5	44
FY 1996-97	\$61.5	50
FY 1997-98	\$90.3	53

### Formulary

Since 1990, California's ADAP has grown from a small program providing AZT and aerosolized pentamidine to a program with a formulary of 53 drugs available in over 2,000 forms, strengths, and sizes. The formulary includes all 12 Food and Drug Administration-approved, HIV-specific antiretrovirals, including four protease inhibitors, two non-nucleoside reverse transcriptase inhibitors, and six nucleoside analogues. The nucleoside analogues include Combivir, the first product to combine two antiviral drugs (lamivudine and zidovudine) into a single tablet formulation. Also included are various drugs to prevent and/or treat opportunistic infections. Table 2 lists the drugs currently included on the ADAP formulary.

### ADAP Medical Advisory Committee

The ADAP Medical Advisory Committee consists of physicians, pharmacologists and community members actively engaged in providing and evaluating drug therapy for persons with HIV/AIDS. The committee meets quarterly to evaluate available HIV/AIDS drugs and make recommendations for changes to the ADAP formulary. These recommendations are

reviewed by the DHS/OA to determine the availability of state, federal, or other funds to cover utilization of any recommended drugs. By law, the Director of DHS makes the final determination regarding the addition or deletion of drugs from the ADAP formulary.

### Conclusion

Early treatment with HIV/AIDS drugs prolongs life, reduces the need for more costly treatments, and maximizes the HIV-infected person's vitality and productivity. The new treatment therapies are delay-

**Table 2. Drugs Currently on the California ADAP Formulary**

acyclovir (Zovirax)	itraconazole (Sporanox)
aerosolized pentamidine (NebuPent, Pentam)	ketoconazole (Nizoral)
amphotericin B (Fungizone)	lamivudine (3TC, Epivir)
atovaquone (Mepron)	lamivudine/zidovudine (Combivir)
azithromycin (Zithromax)	leucovorin calcium (Leucovorin)
bleomycin sulfate (Blenoxane)	liposomal daunorubicin (DaunoXome)
cidofovir (Vistide)	megestrol acetate (Megace)
clarithromycin (Biaxin)	methotrexate (Rheumatrex)
clindamycin (Cleocin)	nelfinavir (Viracept)
clofazimine (Lamprene)	nevirapine (Viramune)
clotrimazole (Lotrimin, Mycelex)	nystatin (Mycostatin)
cyclophosphamide (Cytoxan)	paromomycin (Humatin)
dapsone (Avlosulfon)	prednisone (Deltasone, Orasone)
delavirdine (Rescriptor)	pyrimethamine (Daraprim)
dexamethasone (Decadron, Hexadrol)	rifabutin (Mycobutin)
didanosine (ddI, Videx)	ritonavir (Norvir)
doxorubicin (Adriamycin)	saquinavir (Invirase)
dronabinol (Marinol)	stavudine (d4T, Zerit)
epoetin alfa (Epogen, Procrit)	sulfadiazine (Microsulfon)
ethambutol (Myambutol)	trimethoprim (Trimplex, Proloprim)
filgrastim (Neupogen)	TMP/SMX (Bactrim, Septra)
fluconazole (Diflucan)	trimetrexate glucuronate (Neutrexin)
flucytosine (5FC, Ancobon)	vinblastine sulfate (Velban)
foscarnet (Foscavir)	vincristine sulfate (Oncovin)
ganciclovir (Cytovene)	zalcitabine (ddC, Hivid)
indinavir (Crixivan)	zidovudine (AZT, Retrovir)
interferon alpha (Intron-A, Roferon-A)	

ing disease progression, helping clients remain healthier longer.

On June 20, 1997, the National Institutes of Health released draft clinical guidelines for the treatment of HIV-infected patients (available from the National AIDS Clearinghouse at 800-458-5231 and at their Web site at [www.cdcnac.org](http://www.cdcnac.org) or from the HIV/AIDS Treatment Information Service at 800-448-0440 and at their Web site at [www.hivatis.org](http://www.hivatis.org)). These recommendations urge physicians to prescribe combination antiretroviral therapy, preferably including at least one protease inhibitor and two nucleoside analogues. The ADAP Medical Advisory Committee has reviewed and endorsed these guidelines. These prescribing guidelines are likely to result in continued significant increases in demand for ADAP services as more clients access these costly new therapies. DHS/OA will continue to work to respond to these demands and meet the evolving therapeutic needs of ADAP clients.

## The Need for Methods Women Can Control for Preventing HIV Infection and Other Sexually Transmitted Diseases

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Office of AIDS

and

The Center for Family and Community Health

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### Introduction

While the incidence of AIDS has declined among gay and bisexual men over the past several years, the incidence has increased among women.<sup>1</sup> Between 1985 and 1995, the percentage of total annual AIDS cases in the United States reported among women increased from 7% (n=534) to 19% (n=13,764).<sup>2,3,4</sup> AIDS is the third leading cause of death among all U.S. women aged 18-44 and the leading cause of death among African American women in this age group.<sup>2,3</sup> Worldwide, most HIV-infected women have been infected through heterosexual vaginal sex with an infected male partner.<sup>2</sup> In general, low-income women are at greatest risk of infection as poverty, inadequate

health care, and underemployment have become co-factors for HIV infection.<sup>5,6</sup> Furthermore, women are at greater risk than men of acquiring sexually transmitted diseases (STDs), including HIV infection, given similar exposures. Infections are also more difficult to diagnosis and less likely to be treated in women.<sup>7</sup>

Although the AIDS epidemic is over 15 years old, the sole physical barrier available for preventing STDs, including HIV infection, has been the condom. Condom use has increased among older gay and bisexual males,<sup>8</sup> perhaps due to successful condom promotion in bathhouses, bars, and other places where individuals frequently socialize. However, the promotion of condoms has been less successful for women at risk, many of whom are poor and may not recognize that they are at risk of AIDS. A major drawback of condoms is that women cannot use them at their own discretion without their partner's knowledge or consent. While condoms may be an adequate method of protection for some women, many women lack the power within their relationships to insist on condom use. In some cases, asking a partner to wear a condom is considered inappropriate and could result in violence towards a woman making such a request. For women who are economically dependent on their male partners, insuring that they and their children are fed and sheltered may outweigh the more long-term risk of acquiring AIDS or another STD.<sup>9</sup>

Female condoms provide an option for some women. However, a female condom costs an average of several dollars, too expensive for many women to use on a regular basis. In addition, it is noticeable when inserted and thus, like a male condom, cannot be used without a partner's knowledge or consent.<sup>10</sup>

Thus, there remains an urgent need to develop accessible, affordable alternatives to condoms that women can use without their partner's knowledge or consent to prevent STDs, including HIV infection.

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**Acknowledgments:** *The author gratefully acknowledges useful conversations and comments from Helen Miramontes at the University of California, San Francisco; Ira Tager and Malcom Potts at the University of California, Berkeley, School of Public Health; and William Rogers, Director of HIV/AIDS Programs for the City of Berkeley.*

This article summarizes the complex issues that surround female-controlled methods for HIV and STD prevention and discusses the current status of some of these agents.

### Microbicides

For nearly a decade, researchers have advocated for developing HIV prevention methods that women can control.<sup>11-14</sup> Microbicides, an example of such a method, are substances that can be formulated into gels, foams, sponges, creams, or films that women or men practicing receptive intercourse can use discreetly and without their partner's permission to protect themselves against HIV and other STDs. However, only in the last few years has the need for woman-controlled methods of HIV prevention reached public awareness. Organizations that have made microbicide research a top priority in the past several years include the World Health Organization, the National Institutes of Health, the Population Council, CONRAD, and the Food and Drug Administration (FDA). In 1995, both the National Institute of Allergy and Infectious Diseases and the National Institute of Child Health and Human Development publicly supported research in microbicide development by soliciting research proposals on the topic.

Currently, scientists are researching a variety of substances that kill or inactivate STD-causing bacteria and viruses, including HIV. The goal is to develop a product that is safe and effective, but a number of issues make the development of such products complex. For example, an ideal microbicide would allow women the option of conception without the risk of disease. However, development of non-spermicidal microbicides requires a better understanding of the biology of HIV in sperm. The development of an effective microbicide might also enable women living with HIV to protect their partners from HIV infection and protect themselves from other STDs.

A number of important steps have been made towards developing such microbicides. Several chemicals have been identified that kill HIV *in vitro* and have received regulatory approval for use in humans. These chemicals include: nonoxynol-9, sulfated polysaccharides, gramicidin, BufferGel™, chlorohexidine, benzalkonium chloride, and gossypol.<sup>14-18</sup> Several of these potential microbicides are described below.

### Nonoxynol-9

Nonoxynol-9 is an ingredient in most chemical barrier contraceptives sold in the United States. It has also been demonstrated to kill HIV and other STD pathogens such as *Neisseria gonorrhoeae* and *Chlamydia trachomatis*.<sup>16</sup> While nonoxynol-9 was at one time promoted to prevent HIV infection, there are several serious concerns regarding this product. First, nonoxynol-9, as well as other detergents, may enhance the spread of HIV infection by causing micro-ulcerations of the epithelial lining of the genital track. Second, at certain concentrations, nonoxynol-9 disrupts the vaginal mucosa, which can cause irritation and ulcerations--ideal sites for the entry of HIV. The concentration of nonoxynol-9 in the TODAY® contraceptive sponge, (one gram, the highest concentration available in a contraceptive), was suspected of causing irritation and potentially facilitating HIV transmission in women; this product was removed from the U.S. market. Third, tolerability studies in women and men have concluded that using nonoxynol-9 may cause genital discomfort.

Epidemiologic studies conducted primarily in Africa have produced conflicting results regarding the effectiveness of nonoxynol-9 in protecting women from HIV and other STDs.<sup>13, 20-22</sup> While some studies suggest that nonoxynol-9 might protect against infections, others suggest that nonoxynol-9 may actually facilitate HIV transmission.

In April 1997, Family Health International reported preliminary results of a two-year randomized controlled trial of nonoxynol-9 film.<sup>23</sup> The study involved 1,292 female sex workers in Cameroon, West Africa and tested whether nonoxynol-9 products protect women from HIV, gonorrhea, and chlamydia. The findings were inconclusive because the group using nonoxynol-9 also used condoms 91% of the time. As a result, there were too few "non-condom" events to allow meaningful inferences about the use of nonoxynol-9 alone. While the study did not indicate that nonoxynol-9 products protect against HIV and other STDs, it also did not show that it is harmful. Further study to determine whether nonoxynol-9 products should be promoted for HIV and STD prevention may need to be conducted in populations that are less responsive to condom promotion.

### Sulfated polysaccharides

The Population Council has been focusing its laboratory efforts on reducing the effectiveness of cell-to-cell transmission of HIV infection. The Council has found that seminal fluid can serve as an effective

medium for transmission of HIV by significantly increasing the number of infected lymphocytes adhering to epithelium. Blocking the adhesion of lymphocytes to the epithelial cells could prevent HIV transmission.<sup>15</sup>

The Population Council has identified certain sulfated polysaccharides that block the adhesion of lymphocytes to epithelial cell lines derived from the genital tract. At low concentrations, sulfated polysaccharides such as iota carrageenan, dextran sulfate, and heparin are capable of blocking HIV and chlamydial infection. Iota carrageenan blocks adhesion to a far greater extent than the other sulfated polysaccharides tested.<sup>15</sup> Other potential advantages of sulfated polysaccharides are that they are poorly absorbed into the body and are inexpensive. Some, though not all, have spermicidal activity.

#### *Gramicidin*

Gramicidin is a polypeptide antibiotic that was discovered in 1934 and has been used routinely in contraceptive gels and foams in the Soviet Union. The compound is also used in topical antibiotics, such as Neosporin®, for the treatment of ocular infections. *In vitro* studies have measured gramicidin's ability to inactivate HIV compared with nonoxynol-9 and gossypol, a Chinese cottonseed oil used as a spermicide. The studies demonstrated that a thousand-fold lower concentration of gramicidin was required to inactivate HIV than either of the other two chemicals.<sup>18,19</sup> Currently, *in vivo* studies are underway to better assess gramicidin's potential as a microbicide.

#### *BufferGel™*

The normal vaginal pH is acidic (i.e., ranging from 3.6-6.0). Semen is typically alkaline, with a pH ranging from 7.0-8.4. HIV also has an alkaline pH and is sensitive to low pH environments. Therefore, preventing the alteration of vaginal pH by ejaculate is a potential means of reducing the risk of HIV infection.

BufferGel™ is a vaginally-applied gel designed to act as a buffer to maintain vaginal acid pH in the presence of alkaline semen. A clinical trial of this topical microbicide is currently underway in the United States and should be completed by mid 1997. In the fall of 1997, Phase I safety clinical trials of BufferGel™ are to begin internationally.<sup>24,25</sup>

#### **Lactobacilli**

In addition to microbicides, other substances are being investigated that may provide some protection

against sexual transmission of HIV by enhancing the vagina's natural defense mechanisms. Lactobacilli are one such substance. Found naturally in the vagina, lactobacilli are related to bacterial strains found in yogurt. Some studies have suggested that women with low levels of certain strains of this bacteria are prone to a variety of infections.<sup>26,27</sup> One study is exploring the potential application of a vaginal suppository containing lactobacilli for the prevention of HIV infection in women.<sup>28</sup>

#### **Conclusion**

It is encouraging that microbicide research is beginning to get the funding it deserves. However, the availability of microbicides to the public will likely take at least several more years, pending clinical trials and FDA approval. According to the Reproductive Technologies Group and other experts in the field, resources available for microbicide development are still inadequate, and few foundations or pharmaceutical companies have demonstrated an interest in this area.<sup>29</sup>

Until a female-controlled method for HIV prevention is available, using condoms, reducing the number of sex partners, and/or abstaining remain the primary ways women can protect themselves.

Studies have suggested that contraceptive films and suppositories containing spermicides may not coat the vagina well enough to completely protect against HIV infection. In addition, foams may be too messy and inconvenient to be widely used. These concerns may also apply to any newly-developed microbicide. Thus, it is likely that even when an effective microbicide is available, condoms will still be recommended as a supplementary precaution to ensure that the vagina is protected from infection.<sup>10</sup>

As discussed above, recommending the use of nonoxynol-9 is still controversial. Since recent findings on its efficacy have been inconclusive, some public health officials remain silent on the issue for fear that offering any alternatives will undermine the message that condoms are the most effective barrier method for preventing HIV and STDs. However, some advocate that since nonoxynol-9 can protect against some STDs, it should be offered to women. More research is urgently needed to determine conclusively whether nonoxynol-9 should be recommended for STD and HIV prevention.

Until effective microbicides are available, women (and men) at risk of acquiring sexually transmitted HIV must have better information about what they can do now to protect themselves. Health and medical care professionals need to integrate women-oriented



prevention messages into their contacts with patients. This is particularly true for family planning providers and gynecologists, who may be the sole health professionals to have contact with young, sexually-active women.

For more information about this topic, contact the author at bcyoung@socrates.berkeley.edu or call the Bay Area Microbicide Advocacy Group at the City of Berkeley Office of AIDS, 510-644-6355.

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**Table 1.** AIDS cases by age group, exposure category, and gender reported October 1, 1995 through September 30, 1996 and October 1, 1996 through September 30, 1997; and cumulative totals by age group through September 30, 1997 in California.

Adult/adolescent Exposure Category	Male		Female		Totals		
	Oct. 1995- Sep. 1996 No. (%)	Oct. 1996- Sep. 1997 No. (%)	Oct. 1995- Sep. 1996 No. (%)	Oct. 1996- Sep. 1997 No. (%)	Oct. 1995- Sep. 1996 No. (%)	Oct. 1996- Sep. 1997 No. (%)	Cumulative Total No. (%)
Homosexual/bisexual	6,379 (74)	4,460 (70)	-- (--)	-- (--)	6,379 (67)	4,460 (62)	74,264 (72)
IDU (heterosexual)	860 (10)	702 (11)	326 (35)	255 (33)	1,186 (12)	957 (13)	9,934 (10)
Homosexual/bisexual IDU	683 (8)	467 (7)	-- (--)	-- (--)	683 (7)	467 (7)	8,694 (8)
Lesbian/bisexual IDU	-- (--)	-- (--)	14 (2)	10 (1)	14 (--)	10 (--)	114 (--)
Coagulation Disorders	41 (--)	23 (--)	-- (--)	-- (--)	41 (--)	23 (--)	518 (1)
Heterosexual	175 (2)	129 (2)	421 (46)	335 (44)	596 (6)	464 (6)	3,903 (4)
Blood transfusion	54 (1)	35 (1)	45 (5)	25 (3)	99 (1)	60 (1)	1,526 (2)
Other/undetermined	433 (5)	584 (9)	114 (12)	139 (18)	547 (6)	723 (10)	3,554 (4)
<b>Subtotal</b>	<b>8,625 (100)</b>	<b>6,400 (100)</b>	<b>920 (100)</b>	<b>764 (100)</b>	<b>9,545 (100)</b>	<b>7,164 (100)</b>	<b>102,507 (100)</b>
Pediatric (<13 years old) Exposure Category	Oct. 1995- Sep. 1996 No. (%)	Oct. 1996- Sep. 1997 No. (%)	Oct. 1995- Sep. 1996 No. (%)	Oct. 1996- Sep. 1997 No. (%)	Oct. 1995- Sep. 1996 No. (%)	Oct. 1996- Sep. 1997 No. (%)	Cumulative Total No. (%)
Coagulation Disorders	1 (5)	-- (--)	-- (--)	-- (--)	1 (2)	-- (--)	29 (5)
Blood transfusion	-- (--)	-- (--)	-- (--)	1 (10)	-- (--)	1 (4)	111 (20)
Mother at risk: --IDU	6 (27)	4 (29)	3 (15)	1 (10)	9 (21)	5 (21)	144 (26)
--Sex with IDU	4 (18)	-- (--)	3 (15)	1 (10)	7 (17)	1 (4)	75 (14)
--Sex w/bisexual male	1 (5)	-- (--)	2 (10)	1 (10)	3 (7)	1 (4)	26 (5)
--Sex w/HIV infected	3 (14)	1 (7)	3 (15)	5 (50)	6 (14)	6 (25)	63 (12)
--Blood transfusion	1 (5)	1 (7)	4 (20)	-- (--)	5 (12)	1 (4)	21 (4)
--HIV infected	6 (27)	7 (50)	5 (25)	1 (10)	11 (26)	8 (33)	73 (13)
Other/undetermined	-- (--)	1 (7)	-- (--)	-- (--)	-- (--)	1 (4)	7 (1)
<b>Subtotal</b>	<b>22 (100)</b>	<b>14 (100)</b>	<b>20 (100)</b>	<b>10 (100)</b>	<b>42 (100)</b>	<b>24 (100)</b>	<b>549 (100)</b>
<b>TOTAL</b>	<b>8,647</b>	<b>6,414</b>	<b>940</b>	<b>774</b>	<b>9,587</b>	<b>7,188</b>	<b>103,056</b>

Table 2. AIDS cases by age group, exposure category, and race/ethnicity reported through September 30, 1997 in California.

Adult/adolescent Exposure Category	White No. (%)	Black No. (%)	Hispanic No. (%)	Asian/ Pacific Is. No. (%)	Native American No. (%)	Not Specified No. (%)	TOTAL No. (%)
Homosexual/bisexual	51,228 (80)	8,507 (51)	12,623 (67)	1,538 (75)	246 (57)	122 (74)	74,264 (72)
IDU (heterosexual)	3,744 (6)	4,049 (24)	1,973 (10)	86 (4)	66 (15)	16 (10)	9,934 (10)
Homosexual/bisexual IDU	5,624 (9)	1,616 (10)	1,302 (7)	70 (3)	77 (18)	5 (3)	8,694 (8)
Lesbian/bisexual IDU	48 (--)	40 (--)	21 (--)	1 (--)	4 (1)	-- (--)	114 (--)
Coagulation Disorders	351 (1)	41 (--)	99 (1)	22 (1)	1 (--)	4 (2)	518 (1)
Heterosexual	1,450 (2)	1,220 (7)	1,090 (6)	124 (6)	16 (4)	3 (2)	3,903 (4)
Blood transfusion	893 (1)	168 (1)	350 (2)	108 (5)	3 (1)	4 (2)	1,526 (1)
Other/undetermined	1,037 (2)	997 (6)	1,394 (7)	101 (5)	15 (4)	10 (6)	3,554 (4)
<b>Subtotal</b>	64,375 (100)	16,638 (100)	18,852 (100)	2,050 (100)	428 (100)	164 (100)	102,507 (100)
Pediatric (<13 years old) Exposure Category	White No. (%)	Black No. (%)	Hispanic No. (%)	Asian/ Pacific Is. No. (%)	Native American No. (%)	Not Specified No. (%)	TOTAL No. (%)
Coagulation Disorders	15 (9)	1 (1)	11 (6)	2 (13)	-- (--)	-- (--)	29 (5)
Blood transfusion	41 (25)	23 (14)	40 (20)	7 (47)	-- (--)	-- (--)	111 (20)
Mother at risk: --IDU	50 (31)	68 (40)	22 (11)	-- (--)	4 (80)	-- (--)	144 (26)
--sex with IDU	17 (11)	19 (11)	37 (19)	1 (7)	1 (20)	-- (--)	75 (14)
--sex with bisexual male	8 (5)	4 (2)	13 (7)	1 (7)	-- (--)	-- (--)	26 (5)
--sex w/HIV infected	9 (6)	12 (7)	38 (19)	3 (20)	-- (--)	1 (100)	63 (11)
--blood transfusion	8 (5)	3 (2)	10 (5)	-- (--)	-- (--)	-- (--)	21 (4)
--HIV infected	12 (7)	37 (22)	23 (12)	1 (7)	-- (--)	-- (--)	73 (13)
Other/undetermined	1 (1)	2 (1)	4 (2)	-- (--)	-- (--)	-- (--)	7 (1)
<b>Subtotal</b>	161 (100)	169 (100)	198 (100)	15 (100)	5 (100)	1 (100)	549 (100)
<b>TOTAL</b>	<b>64,536</b>	<b>16,807</b>	<b>19,050</b>	<b>2,065</b>	<b>433</b>	<b>165</b>	<b>103,056</b>

**Table 3. Adult/adolescent AIDS cases by gender, exposure category, and race/ethnicity, reported through September 30, 1997 in California.**

<b>Male Exposure Category</b>	<b>White No. (%)</b>	<b>Black No. (%)</b>	<b>Hispanic No. (%)</b>	<b>Asian/Pacific Is. No. (%)</b>	<b>Native American No. (%)</b>	<b>Not Specified No. (%)</b>	<b>TOTAL No. (%)</b>
Homosexual/bisexual	51,228 (83)	8,507 (60)	12,623 (73)	1,538 (83)	246 (64)	122 (77)	74,264 (77)
IDU (heterosexual)	2,777 (4)	2,915 (20)	1,633 (9)	56 (3)	42 (11)	11 (7)	7,434 (8)
Homosexual/bisexual IDU	5,624 (9)	1,616 (11)	1,302 (7)	70 (4)	77 (20)	5 (3)	8,694 (9)
Coagulation Disorders	337 (1)	39 (--)	97 (1)	22 (1)	1 (--)	4 (3)	500 (1)
Heterosexual	387 (1)	364 (3)	332 (2)	24 (1)	5 (1)	3 (2)	1,115 (1)
Blood transfusion	574 (1)	81 (1)	164 (1)	61 (3)	2 (1)	3 (2)	885 (1)
Other/undetermined	863 (1)	760 (5)	1,216 (7)	83 (4)	9 (2)	10 (6)	2,941 (3)
<b>Subtotal</b>	<b>61,790 (100)</b>	<b>14,282 (100)</b>	<b>17,367 (100)</b>	<b>1,854 (100)</b>	<b>382 (100)</b>	<b>158 (100)</b>	<b>95,833 (100)</b>
<b>Female Exposure Category</b>	<b>White No. (%)</b>	<b>Black No. (%)</b>	<b>Hispanic No. (%)</b>	<b>Asian/Pacific Is. No. (%)</b>	<b>Native American No. (%)</b>	<b>Not Specified No. (%)</b>	<b>TOTAL No. (%)</b>
IDU	967 (37)	1,134 (48)	340 (23)	30 (15)	24 (52)	5 (83)	2,500 (37)
Lesbian/bisexual IDU	48 (2)	40 (2)	21 (1)	1 (1)	4 (9)	-- (--)	114 (2)
Coagulation Disorders	14 (1)	2 (--)	2 (--)	-- (--)	-- (--)	-- (--)	18 (--)
Heterosexual	1,063 (41)	856 (36)	758 (51)	100 (51)	11 (24)	-- (--)	2,788 (42)
Blood transfusion	319 (12)	87 (4)	186 (13)	47 (24)	1 (2)	1 (17)	641 (10)
Other/undetermined	174 (7)	237 (10)	178 (12)	18 (9)	6 (13)	-- (--)	613 (9)
<b>Subtotal</b>	<b>2,585 (100)</b>	<b>2,356 (100)</b>	<b>1,485 (100)</b>	<b>196 (100)</b>	<b>46 (100)</b>	<b>6 (100)</b>	<b>6,674 (100)</b>
<b>TOTAL</b>	<b>64,375</b>	<b>16,638</b>	<b>18,852</b>	<b>2,050</b>	<b>428</b>	<b>164</b>	<b>102,507</b>

**Table 4.** AIDS cases in adolescents and adults under age 25, by exposure category reported October 1, 1995 through September 30, 1996 and October 1, 1996 through September 30, 1997; and cumulative totals by age group through September 30, 1997 in California.

Exposure Category	13-19 years old			20-24 years old		
	Oct. 1995- Sep. 1996 No. (%)	Oct. 1996- Sep. 1997 No. (%)	Cumulative Total No. (%)	Oct. 1995- Sep. 1996 No. (%)	Oct. 1996- Sep. 1997 No. (%)	Cumulative Total No. (%)
Homosexual/bisexual	8 (29)	9 (36)	89 (32)	159 (60)	112 (57)	1,828 (61)
IDU (heterosexual)	-- (--)	-- (--)	8 (3)	20 (8)	21 (11)	283 (10)
Homosexual/bisexual IDU	-- (--)	2 (8)	12 (4)	16 (6)	9 (5)	350 (12)
Lesbian/bisexual IDU	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	5 (--)
Coagulation Disorders	7 (25)	2 (8)	75 (27)	10 (4)	2 (1)	63 (2)
Heterosexual	6 (21)	2 (8)	39 (14)	33 (13)	21 (11)	257 (9)
Blood transfusion	5 (18)	6 (24)	41 (15)	2 (1)	-- (--)	36 (1)
Other/undetermined	2 (7)	4 (16)	18 (6)	23 (9)	33 (17)	153 (5)
<b>TOTAL</b>	<b>28 (100)</b>	<b>25 (100)</b>	<b>282 (100)</b>	<b>263 (100)</b>	<b>198 (100)</b>	<b>2,975 (100)</b>

Table 5. AIDS cases by gender, age at diagnosis, and race/ethnicity, reported through September 30, 1997 in California.

Male Age at Diagnosis-- Years	White No. (%)	Black No. (%)	Hispanic No. (%)	Asian/ Pacific Is. No. (%)	Native American No. (%)	Not Specified No. (%)	TOTAL No. (%)
0-4	46 (--)	61 (--)	69 (--)	4 (--)	2 (1)	-- (--)	182 (--)
5-12	38 (--)	28 (--)	35 (--)	4 (--)	-- (--)	-- (--)	105 (--)
13-19	74 (--)	31 (--)	98 (1)	8 (--)	2 (1)	-- (--)	213 (--)
20-24	1,223 (2)	425 (3)	851 (5)	56 (3)	13 (3)	6 (4)	2,574 (3)
25-29	6,827 (11)	1,880 (13)	3,216 (18)	242 (13)	73 (19)	24 (15)	12,262 (13)
30-34	13,664 (22)	3,283 (23)	4,447 (25)	406 (22)	107 (28)	31 (20)	21,938 (23)
35-39	14,204 (23)	3,299 (23)	3,640 (21)	414 (22)	91 (24)	37 (23)	21,685 (23)
40-44	10,948 (18)	2,435 (17)	2,386 (14)	344 (18)	48 (13)	28 (18)	16,189 (17)
45-49	6,895 (11)	1,409 (10)	1,240 (7)	194 (10)	24 (6)	13 (8)	9,775 (10)
50-54	3,826 (6)	767 (5)	693 (4)	81 (4)	10 (3)	7 (4)	5,384 (6)
55-59	2,113 (3)	399 (3)	418 (2)	58 (3)	9 (2)	7 (4)	3,004 (3)
60-64	1,138 (2)	208 (1)	216 (1)	24 (1)	3 (1)	2 (1)	1,591 (2)
65 or older	878 (1)	146 (1)	162 (1)	27 (1)	2 (1)	3 (2)	1,218 (1)
Subtotal	61,874 (100)	14,371 (100)	17,471 (100)	1,862 (100)	384 (100)	158 (100)	96,120 (100)
Female Age at Diagnosis-- Years	White No. (%)	Black No. (%)	Hispanic No. (%)	Asian/ Pacific Is. No. (%)	Native American No. (%)	Not Specified No. (%)	TOTAL No. (%)
0-4	51 (2)	65 (3)	76 (5)	4 (2)	3 (6)	1 (14)	200 (3)
5-12	26 (1)	15 (1)	18 (1)	3 (1)	-- (--)	-- (--)	62 (1)
13-19	22 (1)	21 (1)	23 (1)	3 (1)	-- (--)	-- (--)	69 (1)
20-24	135 (5)	122 (5)	134 (8)	7 (3)	3 (6)	-- (--)	401 (6)
25-29	385 (14)	322 (13)	285 (18)	27 (13)	8 (16)	-- (--)	1,027 (15)
30-34	563 (21)	488 (20)	311 (20)	27 (13)	11 (22)	2 (29)	1,402 (20)
35-39	461 (17)	531 (22)	266 (17)	44 (22)	9 (18)	1 (14)	1,312 (19)
40-44	368 (14)	399 (16)	185 (12)	22 (11)	5 (10)	1 (14)	980 (14)
45-49	234 (9)	242 (10)	103 (7)	26 (13)	4 (8)	1 (14)	610 (9)
50-54	121 (5)	93 (4)	69 (4)	13 (6)	4 (8)	-- (--)	300 (4)
55-59	71 (3)	71 (3)	51 (3)	10 (5)	1 (2)	-- (--)	204 (3)
60-64	66 (2)	32 (1)	30 (2)	6 (3)	-- (--)	-- (--)	134 (2)
65 or older	159 (6)	35 (1)	28 (2)	11 (5)	1 (2)	1 (14)	235 (3)
Subtotal	2,662 (100)	2,436 (100)	1,579 (100)	203 (100)	49 (100)	7 (100)	6,936 (100)
TOTAL	64,536	16,807	19,050	2,065	433	165	103,056

Table 6. AIDS cases, deaths, and case-fatality rates by half-year of diagnosis through September 30, 1997 in California.

Half-Year of Diagnosis	Number of Cases	Number of Deaths	Case Fatality Rate
Before 1983	302	288	95%
1983 Jan-June	297	287	97%
July-Dec	411	394	96%
1984 Jan-June	590	570	97%
July-Dec	817	785	96%
1985 Jan-June	1,159	1,119	97%
July-Dec	1,421	1,365	96%
1986 Jan-June	1,831	1,770	97%
July-Dec	2,230	2,129	95%
1987 Jan-June	2,751	2,626	95%
July-Dec	2,882	2,710	94%
1988 Jan-June	3,252	3,041	94%
July-Dec	3,357	3,069	91%
1989 Jan-June	3,948	3,538	90%
July-Dec	3,877	3,436	89%
1990 Jan-June	4,477	3,841	86%
July-Dec	4,420	3,745	85%
1991 Jan-June	5,259	4,272	81%
July-Dec	6,092	4,736	78%
1992 Jan-June	6,482	4,610	71%
July-Dec	6,383	4,195	66%
1993 Jan-June	6,408	3,708	58%
July-Dec	5,614	2,752	49%
1994 Jan-June	5,494	2,243	41%
July-Dec	4,748	1,539	32%
1995 Jan-June	4,941	1,187	24%
July-Dec	4,149	777	19%
1996 Jan-June	3,875	522	13%
July-Dec	2,858	306	11%
1997 Jan-June	2,286	174	8%
July-Sep	445	10	2%
<b>TOTAL</b>	<b>103,056</b>	<b>65,744</b>	<b>64%</b>

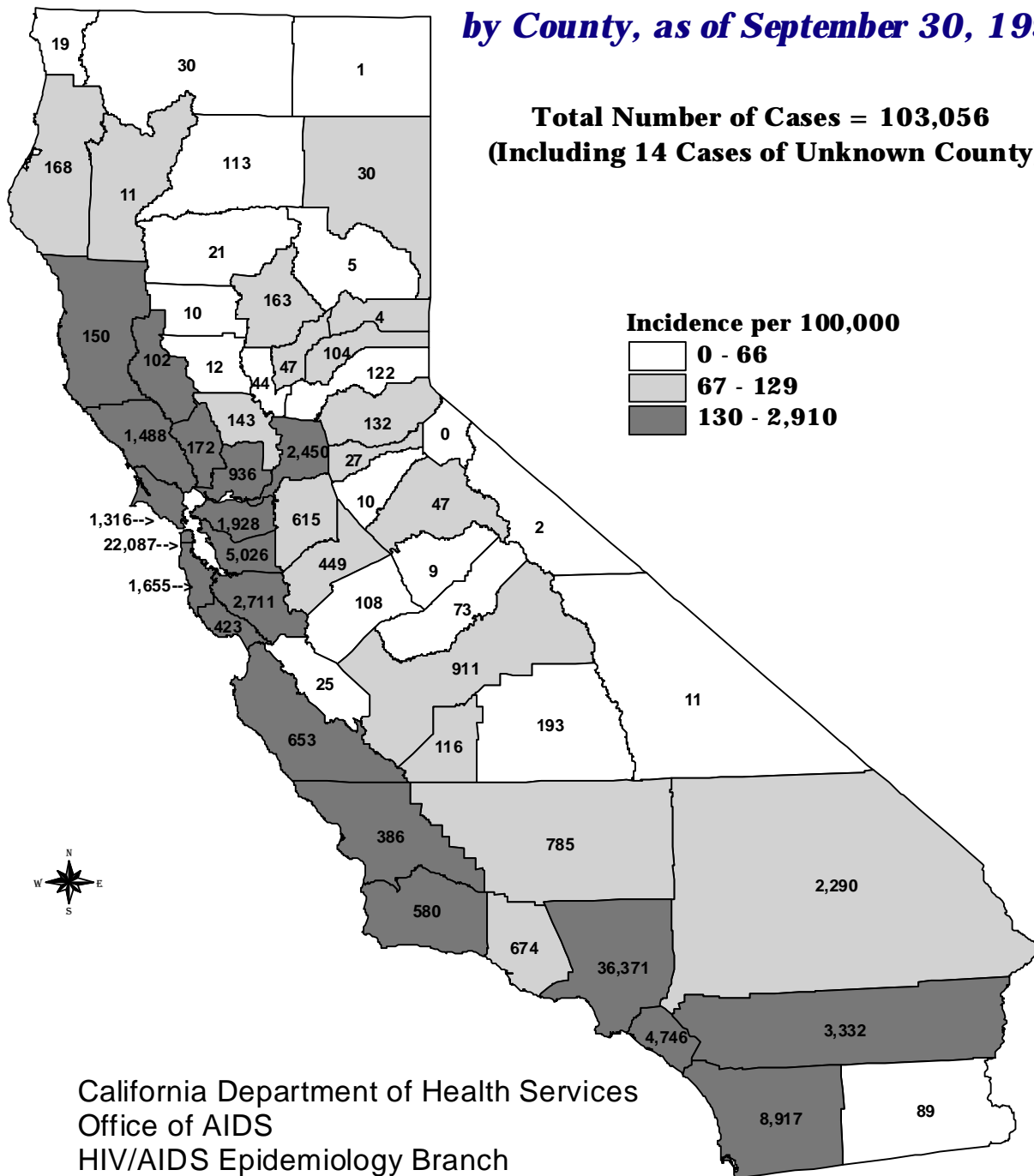
Table 7. AIDS Cases and Cumulative Incidence 1981 through September 30, 1997 in California.

County	AIDS Cases	Deaths	Case Fatality Rate (%)	Incidence Per 100,000	County	AIDS Cases	Deaths	Case Fatality Rate (%)	Incidence Per 100,000
Alameda	5,026	3,221	64.1%	360.78	Orange	4,746	2,699	56.9%	174.95
Berkeley	478	323	67.6%	455.67	Placer	122	66	54.1%	55.85
Alpine	--	--	--	--	Plumas	5	3	60.0%	22.91
Anador	27	17	63.0%	81.30	Riverside	3,332	1,804	54.1%	214.76
Butte	163	110	67.5%	79.97	Sacramento	2,450	1,606	65.6%	201.47
Calaveras	10	6	60.0%	22.84	San Benito	25	10	40.0%	56.37
Colusa	12	11	91.7%	62.38	San Bernardino	2,290	1,331	58.1%	128.69
Contra Costa	1,928	1,251	64.9%	211.96	San Diego	8,917	5,402	60.6%	327.11
Del Norte	19	10	52.6%	61.57	San Francisco	22,087	15,197	68.8%	2,910.11
El Dorado	132	86	65.2%	83.84	San Joaquin	615	394	64.1%	109.52
Fresno	911	576	63.2%	110.08	San Luis Obispo	386	182	47.2%	166.90
Glenn	10	6	60.0%	35.08	San Mateo	1,655	1,038	62.7%	232.77
Humboldt	168	100	59.5%	127.64	Santa Barbara	580	417	71.9%	145.76
Imperial	89	46	51.7%	66.43	Santa Clara	2,711	1,641	60.5%	166.34
Inyo	11	7	63.6%	56.38	Santa Cruz	423	266	62.9%	175.55
Kern	785	394	50.2%	115.50	Shasta	113	83	73.5%	63.57
Kings	116	54	46.6%	102.69	Sierra	4	4	100.0%	119.40
Lake	102	55	53.9%	166.12	Siskiyou	30	16	53.3%	63.88
Lassen	30	12	40.0%	111.71	Solano	936	539	57.6%	225.38
Los Angeles	36,371	23,631	65.0%	377.43	Sonoma	1,488	943	63.4%	338.11
Long Beach	3,221	2,046	63.5%	735.72	Stanislaus	449	269	59.9%	99.15
Pasadena	564	374	66.3%	419.64	Sutter	44	26	59.1%	55.40
Madera	73	41	56.2%	64.74	Tehama	21	11	52.4%	35.65
Marin	1,316	706	53.6%	545.23	Trinity	11	8	72.7%	77.64
Mariposa	9	3	33.3%	50.57	Tulare	193	135	69.9%	50.92
Mendocino	150	107	71.3%	165.31	Tuolumne	47	30	63.8%	83.87
Merced	108	70	64.8%	50.37	Ventura	674	433	64.2%	91.51
Modoc	1	1	100.0%	9.23	Yolo	143	88	61.5%	90.09
Mono	2	1	50.0%	18.48	Yuba	47	29	61.7%	67.36
Monterey	653	384	58.8%	171.63	Unknown	14	8	57.1%	
Napa	172	105	61.0%	142.67					
Nevada	104	55	52.9%	107.99					
					TOTAL	103,056	65,744	63.8%	306.37



## ***Cumulative AIDS Cases in California by County, as of September 30, 1997***

**Total Number of Cases = 103,056  
(Including 14 Cases of Unknown County)**



**MEETINGS/ANNOUNCEMENTS**

**November 9-12, 1997** National AIDS Treatment Advocates Forum, The Handlery Hotel, San Diego, CA. Sponsored by the National Minority AIDS Council (NMAC). For more information, contact the NMAC, 1931 13th St. NW, Washington, D.C. 20009, 202-483-6622.

**April 15, 1998** 11th Annual HIV/AIDS on the Front Line Conference, the Doubletree Hotel, Costa Mesa, CA. Sponsored by the University of California, Irvine; the Irvine Pacific AIDS Education and Training Center; and the Orange County Health Care Agency. For more information, contact the Conference Information Line, 714-834-8020.

**June 28 - July 3, 1998** 12th World AIDS Conference, Geneva, Switzerland. Sponsored by the International AIDS Society. For more information contact C/o Congrex(Sweden)AB, P. O. Box 5619, S-114 86 Stockholm, Sweden, +46 8 612 69 00 (phone) +46 8 612 62 92 (fax), [aids98@congrex.se](mailto:aids98@congrex.se) (email) or <http://www.aids98.ch> (Internet).

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